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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/596,747

05/08/2007

Joachim E. Klee

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EXAMINER

SASTRI, SATYA B

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

07/15/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/596,747	<b>Applicant(s)</b> KLEE ET AL.	
	<b>Examiner</b> SATYA B. SASTRI	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/28/06</u>   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This office action is in response to application filed on 5/08/07. Claims 1-23 are now pending in the application.

#### ***Claim Objection***

2. Claim 1 is also objected to for the use of parenthesis (for L). Parenthesis should be deleted from the claim language to integrate the subject matter enclosed within parenthesis with the claimed subject matter.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 7, 13-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the third structure recited in the claim includes “R<sub>4</sub>” but the group is not defined in the claim language and the term defined in claim 1 for D does not satisfy the valency for a linking group.

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Claims 13, 14, 15 and 16 recite the limitation "said polymerization initiator", "said filler", "said photo initiator" and "said stabilizer" in the claim language, respectively. There is insufficient antecedent basis for these limitations in the claim.

Claims 1, 3, 15, 17 are indefinite because they either recite a range within a range (by using preferably language) or recite a preferred species as in claim 15.

Regarding claims 1 and 23, the phrase "such as" used in defining "L", "L1", "L2" and/or "L3" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). Claims 2-22 depend on rejected claim 1.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-18, 20, 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Klee et al. (US 6,812,266 B2) in view of Moszner et al. (US 6,172,131 B1).

The prior art to Klee et al. discloses a dental adhesive comprising a polymerizable (meth)acrylamide that comprises at least one inorganic acidic moiety, polymerizable comonomer and polymerization initiator, inhibitor and stabilizer for a hydrolysis stable one-part self-etching, self-priming dental adhesive (col. 1, lines 52-60). The monomers are copolymerized with

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monomers for improved hydrolysis stability, such as those recited in col. 3-4. Presently recited (b) and component (c) read on disclosed structures in col. 2-4.

The compositions comprise water and/or organic solvent, thermal or redox or photoinitiator such as camphor quinine and stabilizers such as 2, 6 di-tert.butyl-p-cresol (col. 5, lines 28-36).

The prior art fails to disclose a polymerizable acidic phosphoric acid ester of formula (A) as presently claimed.

Secondary reference to Moszner et al. is in an analogous field of art, i.e. dental adhesives and discloses hydrolysis stable polymerizable acrylphosphonic acids. The presently claimed component (A) reads on the disclosed examples of I shown in col. 7-9. The acidic monomer is used in an amount of 1 to 99% based on the total polymerizable composition, with radically polymerizable comonomers, optionally with a solvent and filler (col. 11, lines 10-25). The polymerizable acrylphosphonic acids are hydrolysis-stable in aqueous solution, have good adhesion properties and are suitable as a component in dental materials (col. 2, lines 44-51). Thus, it would have been obvious to one of ordinary skill in the art to include the acidic monomer within the disclosed range of Moszner et al. in the polymerizable compositions of Klee et al. and thereby arrive at the presently cited claims.

The pH and the properties as presently claimed in claim 3 must be intrinsic to the composition and must necessarily be present in the modified Klee et al. composition.

With regard to claim 5, it is noted that component (d) is optional in claim 1.

With regard to claim 6, it is noted that organic water soluble solvent of component (e) is optional in claim 1.

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***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satya Sastri at (571) 272 1112. The examiner can be reached on Mondays, Thursdays and Fridays, 7AM-5.30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. David Wu can be reached on 571-272-1114.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Satya B Sastri/

Examiner, Art Unit 1796